## A NEW SPIDER OF THE GENUS ARCHAEA FROM AUSTRALIA.

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Family ARCHAEIDAE.<br>Genus ARCHAEA Koch and Berendt, 1854.



Colour. Chelicerae and carapace dark brown, with dark, almost black, markings on the carapace as indicated in figure 1. Abdomen mottled with areas of black and brown, which are broken up by paler circular patches. Two prominent white patches on the dorsal surface at about $\frac{1}{3}$ of its length, and a smaller pair at midway. Posterior portions of tubercles white with a thin overlay of reddish brown pigment. Legs with dark and pale brown bands ; palp pale croam, but tibia dark brown.

Eyes. AME round and black, remaining oyes oval in shape and white. Ratio of AME : ALE: PME : PLE $=11: 10: 11: 11$. The AML and ALE are placed on mounds. The AME are separated from each other by $47 / 11$ and from the ALE by $28 / 11$ of the diameter of an AME. The lateral eyes are subcontiguous, separated by a distance equal to $3 / 11$ of the diameter of an AME. PME separated from each other by $45 / 11$, from the PLE by $20 / 11$, and from the AME by $6 / 11$ of the diameter of an AME. The median ocular quadrangle is wider in front than behind in the ratio of $18: 17$, and the depth is equal to $4 / 18$ of the width in front. The clypeus is short, less than the diameter of an AME.

Carapace. Smooth, apart from rows of minute pustules extending from the base of the neck ; these are continued on the anterior surface of the neek as shown in figure I. Longer than wide at the base in the ratio of $8: 7$. Neck relatively stout, the width at the narrowest portion being almost equal to that of the carapace at the base. Height of head equal to $2 \frac{1}{5}$ times the length of the carapace at the base. Dorsal surface of head slopes down anteriorly, with a pair of small tubercles near the posterior margin and a similar pair about $\frac{2}{3}$ of the distance back from and in line with the lateral eyes. There are numerous small white decumbent setae, which appear under high magnification to be somewhat flattened, spatulate and finely ciliate. Median portion of the anterior surface of the neck from the opening for the chelicerae to the base of the carapace is pale and appears to be only lightly sclerotised (figure 2).


Figures 1-7.-Archaea nodosa sp. nov.

1. Side view of female. 2. Front view of cephalothorax and chelicera (lightly sclerotiserd area stippled). 3. Distal portion of chelicera, prolateral surface. 4. Sternum and pedal coxae. 5. Ventral surface of tibia of leg I , showing spatulate hairs. 6. Tarsal claws and onychium of leg I.
2. Tarsal claw of pedipalp.

Chelicerae. Long and slender, length equal to approximately $11 / 12$ of the height of the carapace. The distal seventh is bent back towards the maxillae. There is a rounded boss on the dorso-lateral surface at $2 / 7$ of the length of the chelicera from the base. Clothed with pale hairs similar to those on the carapace. Fang short but strong, with rod-like bristles on the promargin and a group of three or four around the proximal margin of the furrow (figure 3). A row of relatively strong bristles extends along the entire mid-prolateral surface. Close examination has failed to show the presence of stridulating ridges.

Maxtllaf. Longer than wide at base in ratio of $5: 4$, converging over the labium, with a weak distal scopula, but with well defined serrula. The palp appears to be inserted dorso-laterally near the base of the maxillae.

Labium. As long as wide at the base. Evenly rounded anteriorly, with a notch on the antero-median surface.

Sternum. Longer than wide in ratio of $4: 3$. Shape as shown in figure 4, with a somewhat obtuse point on the posterior surface where it only reaches the anterior surfaces of the fourth pair of coxae, which almost touch in the midline.

Legs. 1. 2. 4. 3. All segments finely granulate and clothed with finely ciliate hairs which are usually blunt apically and directed along the surface of the legs. On the ventral surfaces there are a number of hairs which are tapered distally. Double rows of spatulate hairs are present on the ventral surface of the metatarsus and tarsus of the front pair of legs; each rises from a large pale circular area. They are swollen at the base and appear to have an evenly rounded. tubular proximal portion which may be hollow, and they are expanded and flattoned distally, where there appears to be a thick median vein (figure 5 ). The distal spatulate portiou is finely ciliated. Trichobothria are present in single rows on the dorsal surfaces of the tibia and metatarsus of each leg. They are distributed as follows. Leg 1. Tibia, one at midway and one at two-thirds, metatarsus, one subdistal. Leg 2. Tibia, one at one-third, metatarsus, one subdistal. Leg 3. Tibia, one immediately beyond midway, metatarsus, one subdistal. Leg 4. One at onc-quarter and one at midway, metatarsus, one subdistal. There are also a few erect ciliate hairs on the tibiae of all legs which have the appearance of short trichobothria, but they are stouter and do not rise from a pit as do trichobothria. There are three tarsal claws, placed on a definite onychium. The superior claws are homogeneous with two long pectinations on the ventral surface (figure 6). The inferior claw is curved back close to the surface of the onychium and appears to be smooth. There are strong ciliate setae on the ventral surface, but these do not have the appearance of accessory claws.

Pacr. Short, equal to one-half the length of the femur on leg 1 ; clothed with finely ciliate hairs, which are stouter on the disto-ventral surface of the tarsus where they might be termed serrate. Tarsal claw strong, similar in appearance to the superior pedal claws, with two strong pectinations: (figure 7). Three trichobothria present on the dorsal surface of the tibia, one at midway, one at three-quartors of the length of the segment, and one subdistal.

Abdomen (figure 1). Clothed with white hairs similar in structure to the hairs on the carapace and chelicera. The most prominent feature is the three pairs of large conical tubercles on the dorsal surface, of which the median pair is the largost. The posterior pair on the holotype is set in a shallow depression, probably duo to post-mortern shrinkage. The spinnerets are ventral ; anterior pair contiguous at base, large, broadly conical, of two sogments ; posterior pair very small, difficult to distinguish. Prosence of a median pair of spinnerets indeterminable. Thero appears to be no colulus or posterior spiracle present. The epigynum has no particular form and is not sclerotised.

Type. Holotype female (W.1955) in collections of the Queensland Museum, Brisbane. Legs and palp from right side mounted in polyvinyl alcohol on slide. Tallawallal, Lamington National Park, south-east Queensland, from moss near Nothofagus, 31-10-1955, T. E. Woodward.

## REMARKS.

The first archaeid spider recorded from Australia was described by Butler (1929) as Archaea hickmani, from a single female collected in Victoria. The second species Pararchaea binnaburra Forster was recorded recently (Forster, 1955) from south-east Queensland. The species described above clearly falls into the genus Archuea but would appear to be more closely related to the Madagascan forms than to the previously recorded Australian species A. hickmani, which appears to show some affinity with A.godfreyi Hewitt from South Africa. A.nodosa sp. nov. is separated from A. Tickmani by the longer neck, the presence of large tubercles on the abdomen, the absence of any selerotic plates on the abdomen and the presence of a strong claw on the tarsus of the pedipalp. Two structures described in the present species do not seem to have been recorded in any other. They are the strip of pale, lightly sclerotised integument between the chelicerae and the base of the carapace, and the double rows of spatulate hairs along the ventral surface of the metatarsus and tarsus of the first pair of legs. It is possible that the spatulate hairs could have been overlooked, as it is necessary to remove the appendages to examine them clearly, but it seems unlikely that the thinly sclerotised area between the cheliceral opening and the base of the carapace would have been overlooked, if present in other species.

## LITERATURE CITED.

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